

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of)	
)	
Rechannelization of the 17.7-19.7 GHz)	WT Docket No. 04-143
Frequency Band for Fixed Microwave Services)	
Under Part 101 of the Commission's Rules)	

**Reply Comments of the
Independent Multi-Family Communications Council
(IMCC)**

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The Independent Multi-Family Communications Council (IMCC) is a trade association that represents Private Cable Operators (PCOs), formerly known as SMATV operators, that provide video services to Multiple Dwelling Unit (MDU) building residents in direct competition with franchised cable companies (MSOs). There are hundreds of small businesses known as PCOs across the country, many utilizing 18 GHz microwave to transmit signals to many thousands of MDU residents. This microwave service allows PCOs to reduce cost and therefore provide services at lower price levels, which allows them to compete more vigorously with MSOs. The FCC had said on several occasions, including in its Annual Reports on Video Competition, that PCOs offer meaningful competition to MSOs. In fact, IMCC believes PCOs directly benefit some 5% of MDU residents in communities larger than 100 units, and indirectly benefit a much larger segment of the MDU market due to the threat of competition that forces MSOs to provide better service at lower rates than would otherwise be the case. Microwave transmission is a technological component of the equation that produces a significant economic benefit for television households, a goal espoused by the FCC, and the use of microwave is only realistic if enough contiguous spectrum is available to transmit the same number of channels as provided by the MSOs.

History of FCC Actions Regarding Microwave Video Transmission by PCOs to MDUs

A brief listing of important actions by the FCC regarding PCO use of microwave transmission may help the FCC understand why the IMCC members are supportive of several provisions in this item, but also frustrated by another provision.

- A. Congress has repeatedly directed the FCC to take actions to enhance competition with MSOs.
- B. In 1991, the FCC granted permission to PCOs to use a contiguous 442 MHz, 18.142 - 18.58, on a co-primary basis.

- C. In September of 1998 the FCC released NPRM 98-172 removing that contiguous space and the co-primary basis, which shut down PCO use of microwave transmission.
- D. In February of 1999 the FCC granted emergency relief returning the contiguous space and co-primary status stating that not doing so would militate against the FCC expressed goal of increased video competition.
- E. In June of 2000 the FCC adopted a Report and Order, FCC 00-212, which said (at para. 41) unless PCOs are allowed to keep the contiguous space and co-primary status "...for current and future operations, (they) will not be able to compete effectively against franchised cable operators...".
- F. In November of 2001 the FCC granted PCOs the right to use the lower CARS band after the IMCC requested same but made it clear the request was for a supplement to not a supplanting of the 18 GHz space and was a matter of equity since MSOs could use the lower CARS band PCOs should also have that privilege.
- G. In November of 2002 the FCC issued 02-317, a Second Order on Reconsideration, which again stripped PCOs of the 442 MHz contiguous spectrum and removed the co-primary status. The Order uses as its rationale that PCOs have plenty of spectrum available in the lower and upper CARS bands. Neither of which, in our view and buttressed by studies produced by Comsearch, is accurate due to already existing congestion.

To make clear, this FCC action (a Second Order reinforcing what it determined in its First Order) left PCOs with the spectrum of 12.7 - 13.2 and 17.7- 18.3. IMCC continues to believe that amount of divided spectrum, in already congested bands, is inadequate to compete with MSOs. However, PCOs, manufacturers and MDUs have endeavored to adjust to this reality.

- H. Now, in April of 2004, the FCC Wireless Technology Bureau prepares NPRM 04-143 that proposes to preclude PCO use of the 17.7- 17.8 space--reducing by 100 MHz the spectrum PCOs were just allocated.

Perhaps the FCC can understand why PCOs are frustrated having been dramatically affected by fundamentally different Reports and Orders, emanating from three (3) different Bureaus under three (3) different Chairmen with effects ranging from expanding service to MDU residents to virtually shutting down such service. Now this latest NPRM alters the rules again only 17 months after these small businesses were told to make fundamental changes to their technologies and business models. PCOs require not only a stable regulatory environment but also a business environment in which a

company can prudently take the risk of investing capital with a reasonable chance of returning a positive cash flow.

IMCC SUPPORTS CERTAIN PARTS OF THE NPRM--WT 04-143

IMCC supports the rechannelization of the 17.7 - 18.3 GHz band as a matter of policy and procedure. PCOs, as users of the band, recognize a channelization plan allows for proactive network planning and eases the burden of administration in our frequency applications to the FCC.

The proposal outlined in paragraph 9 of the NPRM regarding the unpaired use of 17.70 - 17.74 GHz is also supported. PCOs/MVPDs have already employed this frequency in a number of applications in 2004. In fact, a significant number of additional deployments are now in the planning stage for completion later this year and in early 2005. The use of the frequency band down to 17.7 GHz is consistent with previous FCC decisions and is critical for the efficient and effective deployment of microwave networks.

IMCC supports allowing PCOs to have flexibility in channel size usage. In the AML technology typically used by PCOs, the cable TV spectrum is block converted to microwave for transmission. The modulations and compression techniques used by cable operators are chosen to provide the maximum number of services to customers, while at the same time managing that spectrum effectively over their HFC networks. The ongoing and evolving needs of PCOs require them to employ techniques of contiguous channel assignment and compression technologies. Therefore, allowing flexibility of microwave band transmission of these signals will permit PCOs to provide timely, efficient, and unencumbered competitive video and data services.

The NPRM asked if the emission and channelization flexibility should be extended to the 18.3 - 18.58 GHz sub-band. Any changes to modulation type, bandwidth or compression would come about through changes to the headend equipment and subscriber equipment; the microwave radio equipment would not require modification, and hence, would not increase the cost of relocation to another frequency band or medium.

The Third Order on Reconsideration allows for such changes, but requires the waiver application process to be followed. This approach will not allow a PCO to provide timely, competitive services to subscribers. Flexibility in spectrum usage is of limited benefit if a waiver process has to be followed to roll out enhanced services. Therefore, IMCC requests that the flexibility in assigning modulation and emissions assignments by PCOs be extended to the 18.3 - 18.58 sub-band with language allowing for modifications to existing links without having to apply for waivers.

IMCC Recommends Change in NPRM

The principal PCO use of 18 GHz microwave has been, in the past, video signal transmission. However, today PCOs must also provide data and voice services. Therefore, IMCC supports the proposed flexibility for MVPDs set out in the NPRM. This flexibility for PCOs should be applied to the entire 17.7 - 18.58 GHz band.

The Commission's present position regarding PCO use of the 17.7 - 18.3 GHz band is set out, among other places in FCC Reports and Orders, in both the 12 GHz CARS eligibility order (CS Docket No. 99-250, FCC-02-149, para. 1) and the 17 - 19 GHz re-designation order (IB Docket No. 98-172, FCC 02-317, paras. 6 and 19). The language in both orders is clear: LICENSEES MAY DISTRIBUTE VIDEO PROGRAMMING IN THE 17.7 - 18.3 GHz BAND.

This present NPRM (WT Docket No. 04-143, FCC-04-77) proposes PCO spectrum use from 17.8 - 18.58 GHz. This suggests that there be a change in the Commission's present position. This change, if implemented, proposes to remove PCO access to the 100 MHz of bandwidth from 17.7 - 17.8 GHz. This reduction in available bandwidth is not acceptable because the band from 17.7 - 18.3 GHz is already heavily congested and, consequently, difficult to use. The loss of this critical 100 MHz previously allocated to the PCOs by the FCC would significantly harm the ability PCOs to provide adequate competitive services now or into the future.

As set out in the Third Order on Reconsideration, the Commission recognized that the IMCC commissioned a frequency conflict study that determined the OET CARS band study was flawed. In Reply Comments, IMCC offered a reasonable explanation as to why

the IMCC study results differed so dramatically from the OET CARS study results. First, IMCC found that the OET had incorrectly assumed that the transmit power of the existing FS links is similar to the transmit power of the PCO links subject to relocation. In reality, the power difference is 20-30 dB, a very significant difference. As a result of this finding, the IMCC commissioned a second band conflict study to reconcile the differences between the OET and IMCC studies. This second IMCC band conflict study was based upon PCO link transmit power being raised to match the power of the existing FS links (not the real world condition). Under this new premise the number of blocked incidents reduced from 38 to 5. This accounts for why the OET study findings were so favorable to the International Bureau's assertion that PCOs would have adequate spectrum available in the upper CARS band. The OET study did not use actual transit operating power. Also, IMCC determined that if the OET study had correctly evaluated the 0.1km transmit to receive co-location conflicts, the OET software would have identified these specific, real conflicts. But, in fact it did not identify them. These IMCC findings call into question the entire OET study process and the resulting conclusion that suggests that the impact on PCO is manageable.

Therefore, we believe that the original IMCC 18GHz band conflict study is valid to use in extrapolating potential conflicts in the 17.7 - 18.3 GHz band and we proceed to use that study procedure to evaluate the impact of the instant NPRM.

That study procedure is the basis for the conflict summary presented in the table below. The table shows how many 6 MHz channels, the spectrum needed to transmit one video program channel, are available (raw channel capacity) if one assumes that even non-contiguous band use is acceptable to cable service customers and economically viable for operators.

The table also shows the number of video channels that PCOs would have to remove if they no longer have use of the 100 MHz from 17.7 - 17.8.

Path Name	Number of 6 MHz Ch.s Available in 17.7 - 18.142 GHz	Minus Channels Available from 17.7 - 17.8 GHz	Ch.s Available in 17.8 - 18.142 GHz
Monument Pk-Estancia	42	7	35

Fox Plaza-Wilshire SE	37	12	25
West Med-Park Place	43	9	34
Shaw Butte-Greenway Spr	15	0	15
Shaw Butte-Spring Meadow	9	0	9
Riverside-Hunterglen	41	16	25
Hallandale-Paradise Pt	73	16	57
Philip Howa-Lawrence GA	73	16	57
Bonaventure-Pear Ridge	51	16	35
W 8th St-Brightwater	60	6	54

Information Compiled from Comsearch Frequency Study of 17.7 - 18.142 GHz
(studies attached to IMCC Comments and Reply Comments viz Third Petition for
Reconsideration, 98-172)

As can be seen in the table above, when one considers only the notion of relocating the 18.3 - 18.58 GHz band (46 channels) into the 17.7 - 18.3 band, 60% of the links do not even have the raw capacity to accommodate such a move. This is without any consideration for growth in video program channel count.

PCO relocation into the full 17.7 - 18.3 GHz band was correctly recognized by the Commission as vital. We agree with the Commission's concerns as stated in footnote 22 of the instant NPRM regarding the heavy cost (and therefore economic infeasibility) of operating dual microwave systems (13 GHz & 18 GHz) to secure sufficient capacity for video program distribution. This footnote emphasizes the need for PCOs to have access to the full 600 MHz bandwidth if they are to provide the number of video program channels needed to compete with franchised cable systems.

In summary, access to the full 600 MHz 17.7 - 18.3 GHz is necessary for the PCOs to have a reasonably cost effective transmission solution that can be competitive with the large telecommunications and cable companies. Also, that access is necessary if PCOs are to have access to sufficient bandwidth to have any chance of managing the "patchwork quilt" of unblocked and blocked frequencies in the 17.7 - 18.3 GHz space as PCO services grow and PCOs migrate their existing services, at the end of the sunset period, and are forced to abandon use of the 18.3 - 18.58 GHz band.

For the reasons outlined above, the Commission should amend its proposal in this NPRM and determine that PCOs can use the entire 17.7 - 18.58 GHz band for final RF links. This proposal is consistent with and necessary to effectuate the Commission decision in the 12 GHz Report and Order (FCC 02-149) which states in paragraph 1: “It (this order) will also increase the number of frequencies available to NMPVDs for video programming distribution in the 18 GHz band (17.70 - 18.58 GHz), in addition to those on which they may currently operate under Part 101 of the Commission’s rules.”

Reply Comments Regarding Comsearch Filing

In the comments filed by Comsearch, clarification was requested for the concept of “contiguous” spectrum, particularly in relation to the process of applying for licenses where small segments are already assigned to other parties and therefore not available to the PCO. We support Comsearch’s observations on this matter and request further definition of contiguous spectrum; in particular in defining what spectrum usage qualifies as contiguous. Therefore, it is important that some definition of what constitutes contiguous usage of spectrum be stated, which recognizes the realities of the technical limits of the microwave equipment, the many services deployed and required system performance.

Reply Comments Regarding Filing by FWCC and Alcatel

We do not share the view expressed by the Fixed Wireless Communications Council (FWCC) and Alcatel that MVPD spectrum usage is inefficient with respect to other FS users. Virtually all the MVPD emissions are video or high-speed data, with video having the equivalent of 20 Mbps of information throughput in a 6 MHz bandwidth and an even higher effective information rate with compression. Very few other FS users have this level of spectral efficiency.

Conclusion

For the reasons set forth above, the Commission should adopt its rechannelization plan as delineated in its NPRM but with the amendments recommended by IMCC.

Respectfully submitted,

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